



# FARMERS PERCEPTION AND ECONOMIC CONSTRAINS IN THE IMPLEMENTATION OF THE LEGAL FRAMEWORK AND VOLUNTARY CERTIFICATION SYSTEMS INFLUENCING COFFEE AGRO FORESTRY SYSTEMS (AFSC) IN COSTA RICA

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## BACKGROUND

The different worldwide coffee crises lead to the lack of care in the productive process, as strategy for reducing costs, generating reduction in the productivity (11 % between 98/99 and 02/03) and consequently the loss of income. On the other hand, there is an emergence of certification schemes related to changes in consumption patterns, aimed to food safety, attention to environmental problems associated with the production, and the interest for the improvement of social conditions of producers and workers.

Thus, the certification of the production appears as an opportunity for the coffee growers, with advantages such as (Giovannucci 2003): better administration of the natural resource, rural self-sufficiency, community development, reduction of the financial risk and of the fluctuation of the prices, greater access to the market information , increase in the use of rural workforce and lower risks to the human health and to the environment.

The scope of these benefits is determined, among others, by the compliance of the requisite of certification, which includes the observance of the national legislation, and depends on the perception of the producers about their appropriation, impacts, independence of the actors, coherence and application

## OBJECTIVES

1. Describe the normative framework that governs the legislation and the certification of the Agro Forestry Systems of Coffee, AFSC.
2. Analyze the restrictions and incentives of the normative framework for AFSC's adoption.
- 3 Identify and quantify the costs of access to the legality and to the certification for the producers of AFSC.
4. Evaluate the impact of the costs of access to the legality and to the certification of the AFSC on the profitability of the producer.



## RESULTS

The main legal framework applied to the AFSC in Costa Rica are divided in three types:

- Those that control and promote the coffee growing activity: regulation of the price, positioning of the quality of the coffee, generation of spaces for representation of the producers and the constitution of the National Fund for Coffee Stabilization -FONECAFE.
- Rules relative to the forestry component
- Rules related to the compliance of certification standards regarding the fair payment to workers.

The legislation and certification promote the adoption of the Agro forestry Systems, not necessarily in multistrata systems or with products associated to the market. The supply of certified coffee does not reach the whole, market with a price that stimulates an assured maintenance of the agro forest systems of coffee; that explains the combination of labels by producers as alternative to reach different clients and demand niches.

The regulatory framework to the coffee price is applicable as far as the control is exerted directly on the transactions between coffee processors and exporters, being a model that generates equitable distribution of income. Likewise, the FONECAFE fee is of mandatory payment by the coffe processors , being an efficient collection thanks to the information submitted to the ICAFE.

The Payment for Environmental Services program (PES) even in its AFSC support component, does not constitute yet an incentive to coffe producers, that promotes the forest component in general terms because of the lack of knowledge of the benefits and procedures. This results from a lack of knowledge at famers level of the benefits and the procedures to access the program.

The forest component was only reflected as a commercial activity in Perez Zeledón's region; in other regions the knowledge of the Forest Law is aimed to the protection of the water sources. The costs of access to the legality and to the certification for the analyzed case studies ranges from 368 to 748 USD/ha-year, being the social security and the contribution to FONECAFE, the most important(Table 3).

## METHODS

The perception about the rules was obtained through a qualitative analysis from 71 interviews: 43 to producers and 28 to officers from ICAFE, Ministry of Agriculture and Livestock, Ministry of Environment and Energy, 5 cooperatives, 2 associations, certifier agencies and Ngo's. On the other hand, 10 case studies were selected for the construction of cash flows of the productive system, in order to perform microeconomic analysis related to the Land Expected Value, LEV, and Actual Net Value ANV, including sensitivity analysis of identified costs of access to legality and certification.

## AREA OF STUDY

The research was carried out in four Costa Rican coffee growing zones: Valle Central, Turrialba, Perez Zeledón and Los Santos; that represent 70% of the national production of coffee in the country during 2004-2007 (Table 1).

Table 1: Production of coffee cherry in selected zones

	2004-2005		2005-2006		2006-2007	
	Quintales	%	Quintales	%	Quintales	%
Valle Central	448692	18%	459230	20%	407840	17%
Perez Zeledón	383594	15%	373865	16%	330258	14%
Los Santos	764503	30%	683675	29%	728015	31%
Turrialba	164277	7%	160240	7%	179161	8%
Nacional	2514444	100%	2333647	100%	2383313	100%

Source ICAFE, 2007

According to the particular conditions of every zone, types of producers for sampling were defined according to altitude, farm size, level of organization and the adopted label (Table 2).

Table 2: Producing regions of coffee sampled according with the criteria of selection

	Small asociated producer (<14 Has)		Medium and Large Independence producer (>14 Has)	
	Highland coffee	Lowland coffee	Highland coffee	Lowland coffee
Fair Trade	Los Santos	Pérez Zeledón	-	-
Organic	Los Santos	Pérez Zeledón	Valle Central	-
Rainforest Alliance	Los Santos	-	Valle Central	Turrialba
No Label	Los Santos	Pérez Zeledón	Valle Central	Turrialba

Table 3: Leglaity and Certification cost of access (U\$/ha-year)

Case Study	Productivity (Chery Coffee fanega/ha)	Legality of cost of access			Certification cost of access					TOTAL
		FONECAFE	Forest Advantage Permission	Subtotal	Certification	Organization Contribute	Indirect labour cost	Risk policy	Subtotal	
RA LS	43.5	\$ 120	\$ 0	\$ 120	\$ 12	\$ 101	\$ 445	\$ 71	\$ 628	\$ 748
RA VC	18.6	\$ 51	\$ 0	\$ 51	\$ 40	\$ 0	\$ 241	\$ 36	\$ 317	\$ 368
RA Turri	33.7	\$ 93	\$ 0	\$ 93	\$ 10	\$ 0	\$ 400	\$ 65	\$ 475	\$ 568
Org LS	25.0	\$ 69	\$ 0	\$ 69	\$ 44	\$ 61	\$ 235	\$ 38	\$ 377	\$ 446
Org PZ	25.3	\$ 70	\$ 0	\$ 70	\$ 13	\$ 63	\$ 342	\$ 54	\$ 471	\$ 541
Org VC	27.5	\$ 76	\$ 0	\$ 76	\$ 33	\$ 0	\$ 388	\$ 57	\$ 478	\$ 554
FT LS	35.5	\$ 98	\$ 0	\$ 98	\$ 1	\$ 75	\$ 331	\$ 53	\$ 460	\$ 558
FT PZ	36.3	\$ 100	\$ 118	\$ 218	\$ 0	\$ 67	\$ 361	\$ 58	\$ 486	\$ 704
Conv LS	37.2	\$ 103	\$ 0	\$ 103	\$ 0	\$ 0	\$ 545	\$ 85	\$ 630	\$ 733
Conv PZ	24.9	\$ 69	\$ 105	\$ 173	\$ 0	\$ 0	\$ 284	\$ 45	\$ 328	\$ 502

RA: Rainforest Alliance; Org: Organic; FT: Fair Trade; Conv: Conventional; LS: Los Santos; VC: Valle Central; PZ: Perez Zeledón; Turri: Turrialba

From the costs, the one that most affects producers profitability is social security payments, including the insurance to workers, while the least relevant are those associated with the certification (Table 4).

Table 4: Variable sensitivity: Net present values in colones (Cofee + asociated product) U\$/ha

Case Study	Regulate	Increase 16% certification	Diminution 16% certification	Increase 16% association	Diminution 16% asociación	Increase 16% FONECAFE	Diminution 16% FONECAFE	Increase 16% indirect labour cost and policy of risk	Diminution 16% indirect labour cost and policy of risk	Increase 16% coffe prize	Diminution 16% coffe prize	Increase 16% TMA	Diminution 16% TMA
RA LS	\$ 1,897	\$ 1,895	\$ 1,899	\$ 1,882	\$ 1,912	\$ 1,879	\$ 1,915	\$ 1,568	\$ 2,226	\$ 2,664	\$ 1,130	\$ 1,860	\$ 1,935
RA VC	\$ 473	\$ 467	\$ 479	NA	NA	\$ 465	\$ 480	\$ 307	\$ 638	\$ 800	\$ 146	\$ 463	\$ 482
RA Turri	\$ 482	\$ 480	\$ 483	NA	NA	\$ 468	\$ 496	\$ 187	\$ 776	\$ 978	-\$ 15	\$ 472	\$ 491
Org LS	\$ 1,235	\$ 1,228	\$ 1,241	\$ 1,225	\$ 1,244	\$ 1,224	\$ 1,245	\$ 1,061	\$ 1,408	\$ 1,517	\$ 952	\$ 1,211	\$ 1,260
Org PZ	\$ 1,217	\$ 1,215	\$ 1,219	\$ 1,207	\$ 1,226	\$ 1,206	\$ 1,227	\$ 964	\$ 1,469	\$ 1,694	\$ 739	\$ 1,193	\$ 1,241
Org VC	\$ 302	\$ 297	\$ 307	NA	NA	\$ 291	\$ 314	\$ 18	\$ 587	\$ 753	-\$ 148	\$ 296	\$ 309
FT LS	\$ 7,667	\$ 7,667	\$ 7,667	\$ 7,656	\$ 7,678	\$ 7,652	\$ 7,681	\$ 7,374	\$ 7,959	\$ 8,239	\$ 7,095	\$ 7,517	\$ 7,822
FT PZ	\$ 1,078	\$ 1,078	\$ 1,078	\$ 1,068	\$ 1,088	\$ 1,063	\$ 1,093	\$ 807	\$ 1,349	\$ 1,593	\$ 563	\$ 1,057	\$ 1,100
Conv LS	\$ 6,783	NA	NA	NA	NA	\$ 6,767	\$ 6,798	\$ 6,358	\$ 7,208	\$ 7,391	\$ 6,174	\$ 6,651	\$ 6,920
Conv PZ	\$ 447	NA	NA	NA	NA	\$ 436	\$ 457	\$ 253	\$ 640	\$ 758	\$ 136	\$ 438	\$ 456

RA: Rainforest Alliance; Org: Organic; FT: Fair Trade; Conv: Conventional; LS: Los Santos; VC: Valle Central; PZ: Perez Zeledón; Turri: Turrialba

Comparing against the land prices for the year 2007, the alternatives for the "non-profitable producers" would be the land use change , the incorporation of products associated to high impact on the profitability, the improvement of coffee productivity and, lastly, the hope for a price improvement as a premium for certification.

## CONCLUSION

The incidence of the producers on the proposal and follow-up of laws and certification schemes not only can work for its adjustment to particular situations, but also as a mechanism of disclosing requirements and consequences of breaches. In this respect, the participative design of sanctioning mechanisms to organizations, in case of certification schemes, appears as a feasible strategy. Here is fundamental the appropriation of the "game rules " by the producers, so that benefits and costs from being in the legality or from certifying the produced coffee can be clearly understood. In that way, credibility and sustainability can be guaranteed from these rules. Microeconomic sensitive analysis from case studies shows that certification costs are the least relevant (0.001 to 1.3%), while social security payments are those that affect the most profitability of productive systems (3.8 to 61.2%).



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